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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/601,961	08/25/2000	Peter Augustinius Johannes Achten	7238/OH418	5233

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Darby & Darby
805 Third Avenue
New York, NY 10022-7513

EXAMINER

LOPEZ, FRANK D

ART UNIT	PAPER NUMBER
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3745

DATE MAILED: 07/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/601,961

Applicant(s)

ACHTEN, PETER AUGUSTINIUS
JOHANNE

Examiner

F. Daniel Lopez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Amendment

Applicant's arguments filed April 29, 2002, have been fully considered but they are not deemed to be persuasive.

Applicant's arguments with respect to claims 21-45 have been considered but are deemed to be moot in view of the new grounds of rejection. The new grounds of rejection are necessitated by the added limitations that created new 112 rejections.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

Claims 21-45 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 21 line 8-10 "a plurality of connecting lines connecting the hydraulic transformer, the hydrometer and the control means for controlling the adjustment means" is confusing, due to improper English; since it is unclear what the relationship between the control means and the connecting lines is. In claim 21 line 9 "the hydrometer" should be --hydromotor--. In claim 21 line 9 "the control" has no antecedent basis.

In claim 39 line 2 "the third face plate" should be --the face plate --, to agree with claim 33 line 7.

Claims not specifically mentioned are indefinite, since they depend from one of the above claims.

Claim Rejections - 35 USC § 102

Claims 21, 22, 25, 26 and 32 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103 as obvious over Roche. Roche discloses a transformer which includes fluid displacers (e.g. 36, 38) rotatably

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coupled together. It would appear that there is a rotor, either as part of each displacer, or part of what couples the displacers together, and so meets the limitation concerning the transformer with a rotor. If not, it would have been obvious to include a rotor, either as part of each displacer, or part of what couples the displacers together.

Concerning claim 25, Roche discloses the flow sensor (e.g. 366), which is shown as a restriction in a circle. Standard flow sensors are pressure sensors connected to a restriction valve in the fluid line. It would appear that the flow sensor 202 of Roche is a standard flow sensor, which includes a restriction valve; if not, one of ordinary skill in this art would make the flow sensor of Roche with a restriction valve in the flow line.

Concerning the limitation that the transformer is provided with a continuously variable setting, it would appear that the valves controlling the displacers (A, B, C, a, b, c, d), which includes throttle valve 362, makes the transformer of Roche continuously variable (column 17 line 7-20).

Claim Rejections - 35 USC § 103

Claims 23, 24 and 31 are rejected under 35 U.S.C. § 103 as being unpatentable over Roche. Roche discloses a fluid system comprising a hydraulic transformer (e.g. including 278, 286), provided with a rotor (see above) and an adjusting means (including 298, 300), connected to a hydromotor by connecting lines (e.g. 276); high (e.g. 272) and low (e.g. 296) pressure lines for transporting fluid to and from the transformer; and a flow sensor (e.g. 366) measuring the flow in the connecting line between the transformer and the hydromotor; but does not disclose that the flow sensor is a movement sensor for measuring the rotor's rate of rotation, or for measuring the hydromotor's rate of movement; or that the hydromotor is a linear cylinder, and the hydraulic system includes means for supplying fluid to the cylinder from the low-pressure line.

Official notice is taken that flow to a hydromotor from a transformer can be measured by a number of sensors, which include a movement sensor for measuring the rotor's rate of rotation, and a movement sensor for measuring the hydromotor's rate of movement. It would have been obvious at the time the invention was made to one

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having ordinary skill in the art to replace the flow sensor of Roche with a flow sensor, which includes either a movement sensor for measuring the rotor's rate of rotation, or a movement sensor for measuring the hydromotor's rate of movement, as a matter of engineering expediency.

Official notice is taken that a hydromotor can be a linear cylinder, and that hydraulic systems include means for supplying fluid to the cylinder from the low-pressure line, to prevent cavitation. It would have been obvious at the time the invention was made to one having ordinary skill in the art to make the hydromotor of Roche a linear cylinder, as a matter of engineering expediency, with means for supplying fluid to the cylinder from the low-pressure line, to prevent cavitation.

Claims 34-37 and 24 are rejected under 35 U.S.C. § 103 as being unpatentable over Roche in view of Tyler. Roche discloses a fluid system comprising a hydraulic transformer (e.g. including 36, 38), provided with a rotor (see above) and an adjusting means (e.g. including 56, 58), connected to a hydromotor by connecting lines (e.g. 30); high (e.g. 26) and low (e.g. 60) pressure lines for transporting fluid to and from the transformer; and a flow sensor (e.g. 366) measuring the flow in the connecting line between the transformer and the hydromotor; wherein the transformer transforms a first pressure into a second pressure, and includes first, second and third fluid lines connections, a rotor limitlessly rotatable with respect to a housing, a plurality of fluid chambers whose volume varies during rotation between a minimum and a maximum; but does not disclose that the transformer includes a face plate which, during rotation of the rotor, serve to seal and alternately connect the fluid chambers to the three line connections, via face plate gates and three rotor gates; wherein the volume of the fluid chambers when sealed by the face plate have a maximum volume which is either three or four times a minimum volume when sealed; that the rotor has nine or twelve chambers; or that two of the rotor gates are the same size and three walls between the rotor gates simultaneously seal off a chamber.

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Tyler teaches, for a transformer (14) which transforms a first pressure into a second pressure, and includes first, second and third fluid lines connections (connected to 78, 82, 86), a rotor (24) limitlessly rotatable with respect to a housing (42), a plurality of fluid chambers (26) whose volume varies during rotation between a minimum and a maximum; that the transformer includes a face plate (68) which, during rotation of the rotor, serve to seal and alternatingly connect the fluid chambers to the three line connections, via face plate gates and three rotor gates (opposite ends of 70, 71, 72, 74); wherein the volume of the fluid chambers when sealed by the face plate have a maximum volume which is either three or four times a minimum volume when sealed (since the chambers are sealed at top and bottom of the movement, where there is little change in movement of the pistons and that two of the rotor gates (e.g. 71, 72) are the same size and three walls between the rotor gates simultaneously seal off a chamber.

Since Roche does not teach details of the displacers and Tyler does; it would have been obvious at the time the invention was made to one having ordinary skill in the art to make the displacers of Roche include a face plate which, during rotation of the rotor, serve to seal and alternatingly connect the fluid chambers to the three line connections, via face plate gates and three rotor gates; wherein the volume of the fluid chambers when sealed by the face plate have a maximum volume which is either three or four times a minimum volume when sealed; and that two of the rotor gates are the same size and three walls between the rotor gates simultaneously seal off a chamber, as taught by Tyler, as a matter of engineering expediency.

Note that since the claim language uses the open-ended form "comprising", a limitation claiming "three rotor gates" is met by a device having more than three rotor gates.

The transformer of the modified Roche has two concentric rings of chambers, with the number in each ring being chosen for optimum results. It would have been obvious at the time the invention was made to one having ordinary skill in the art to make the number of chambers in each ring of the modified Roche 6, resulting in a total of twelve chambers, as a matter of engineering expediency.

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Conclusion

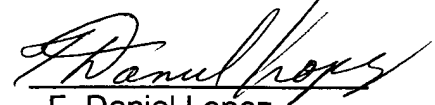
Claims 28-30, 33 and 38-42 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is (703) 308-0008. The examiner can normally be reached on Monday-Thursday from 6:30 AM -4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on (703) 308-1044. The fax number for this group is (703) 872-9302. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0861.



F. Daniel Lopez
Primary Examiner
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July 08, 2002